

19. **(Original)** An optical system according to claim 13 further including a reflective element.

20. **(Original)** An optical system according to claim 13 wherein the illumination source provides polarized light in a polarization state.

21. **(New)** A screen according to claim 1 wherein the polymeric composition is a pressure sensitive adhesive composition.

22. **(New)** A method of making an optical element according to claim 11 wherein the polymeric composition is a pressure sensitive adhesive composition.

23. **(New)** A method of making an optical element according to claim 12 wherein the polymeric composition is a pressure sensitive adhesive composition.

24. **(New)** An optical system according to claim 13 wherein the adhesive material is a pressure sensitive adhesive material.

Remarks

Claims 1-20 are pending in the application. Applicants wish to thank the examiner for the indication of allowability of Claims 12. The title of the invention and Figures 6-10 have been amended. Claims 11-13 and 15 have been amended. In particular, claim 12, originally depending from the original claim 12, has been rewritten in an independent form that includes all the elements of the original claim 12. New claims 22-24 have been added. All amendments are explicitly supported by the specification. As such, no new matter has been introduced.

The drawings are objected to because Figures 6-10 fail to show the units in each axis of the graphs. Without acquiescing in the Examiner's objection, each of the objected to plots is amended in a manner that overcomes the objection. In particular:

Regarding Figure 6: Phrases "Wavelength (nm)" and "Relative Intensity" are added as titles to the horizontal and vertical axes, respectively. Support for the two phrases may be found in the specification, for example, on page 3, line 9. Furthermore, the five lines plotted in Figure 6 have been labeled, from top to bottom, "Film C", "Film B", "Film A", "No Film", and "Film D". Support for the labels may found in the specification, page 50, lines 12-13; and page 3, lines 10-12.

Regarding Figure 7: Phrases "Diffusion Angle (Degrees)" and "Extinction Ratio" are added as titles to the horizontal and vertical axes, respectively. Support for the two phrases may be found in the specification, for example, on page 3, line 13; and on page 51, line 4.

Regarding Figures 8-10: Phrases "Viewing Angle (Degrees)" and "Gain" are added as titles to the horizontal and vertical axes, respectively. Support for the two phrases may be found in the specification, on page 50, lines 15-16, 18-19, and 21-22; on page 51, lines 22-26; on page 52, lines 12-16; and on page 53, lines 2-7.

Furthermore, the legend showed below is added to each of Figures 8-10. Support for the legend may be found in the specification, for example, on page 3, lines 15-16, 18-19, and 21-22.

————— Horizontal
----- Vertical

The Examiner states that the title of the invention is not descriptive and requires a new title. Without necessarily agreeing with the Examiner, and to expedite the prosecution of the above-identified application, the title has been amended in a manner to overcome the objection.

New claims 22-24 have been added. Support for the new claims may be found, for example, on page 5, lines 17-18; and on page 7, lines 15-22

§103 Rejections:

Claims 1-2, 4-8, 11, 13-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (U.S. Patent No. 6,172,814B1) in view of Ouderkirk et al. (U.S. Patent No. 5,825,543). Applicants respectfully disagree.

Regarding independent Claims 1, 11, and 13, the Examiner states that it would have been obvious to “utilize the dispersed phase material disclosed by Ouderkirk et al. in substitution of the transparent ball disposing layer from Watanabe et al...” The proposed substitution, however, would not result in substantially aligned elongated structures in an *adhesive* material as claimed by the Applicants. This is so, because Ouderkirk et al. do not teach or suggest an adhesive continuous matrix. The Examiner treats an “adhesive material” and a “resin” as synonyms. “Adhesive,” however, is defined as “sticky” (The American Heritage Dictionary of the English Language, 4th Edition, Houghton Mifflin Compnay 2000). In other words, adhesive materials of the present invention are *capable* of binding *other substances* (i.e., substances external to the adhesive material) together by surface attachment (see, for example, Condensed Chemical Dictionary, 12th Ed., Van Nostrand Reinhold, New York, NY 1993). Ouderkirk et al. do not teach or suggest a continuous phase having such capability.

Furthermore, a major advantage of the structures disclosed in Watanabe et al. is improved screen contrast by virtue of *partially* embedding balls 12 in “light absorbing layer” 13 (col. 9, line 45) leaving a substantial portion of each ball outside the light absorbing layer (see, e.g., col. 9, lines 10-12). Ouderkirk et al., on the other hand, do not teach or suggest: (1) a light absorbing layer or a film having high contrast; or (2) particles, all of which, are only partially embedded in a resin. There is no teaching or suggestion in the cited references as to how the dispersed phase structures of Ouderkirk et al. could be partially embedded in a light absorbing layer as taught by Watanabe et al.. As such, there could have been no reasonable motivation to substitute the transparent ball disposing layer 14 of Watanbe et al. with the dispersed phase material disclosed by Ouderkirk et al. when doing so would result in either a screen with no contrast or a screen with particles fully embedded in a black layer resulting in a screen with essentially zero optical transmission. As such, under either scenario, the Examiner’s proposed substitution would go against the teachings of Watanabe et al..

In addition, although Watanabe discloses adhesive layers (see, e.g., col. 16, lines 40-45), there is no teaching or suggestion in Ouderkirk et al. that a disperse phase would work or be compatible with an adhesive continuous phase. Furthermore, Watanabe et al. do not teach or suggest elongated structures in the adhesive elements they disclose.

Claims 22-24 have been added to further reinforce that the adhesive materials or compositions of the present invention are adhesives according to the common understanding of the term. Therefore, Claims 1, 11, and 13 are patentable under 35 U.S.C. 103(a) over the references cited by the Examiner.

Regarding Claims 2, 4-8, 14-18, and 20, without acquiescing in the Examiner's rejection, since these claims depend from claims that are patentable for the reasons set forth herein, these claims are patentable at least for the same reasons and the rejection is rendered moot. As such, Applicants respectfully request withdrawal of the rejection of Claims 1-2, 4-8, 11, 13-18 and 20.

Claims 3, 9-10, and 19 are rejected under U.S.C. 103(a) as being unpatentable over Watanabe et al. in view of Ouderkirk et al., and further in view of Harada et al. (U.S. Patent No. 6,381,068 B1). Harada et al., however, does not add any teaching to that of Watanabe et al. and Ouderkirk et al. that would render the inventions of the underlying claims obvious. Therefore, the proposed combination does not render the inventions of Claims 3, 9-10, and 19 obvious either.

In view of the above, it is submitted that the application is in condition for allowance. Applicants respectfully request that the Examiner reconsider the rejections and allow all the claims currently pending.

Respectfully submitted,

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